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### REMARKS

The foregoing amendments and following comments are believed to be fully responsive to the Office Action of August 14, 2007. Accordingly, reconsideration of the claim rejections is requested in light of the foregoing amendments and following comments.

A request for continued examination is being filed concurrently herewith, along with authorization to charge the appropriate fees for this request to the deposit account of the law firm of the undersigned counsel. In addition, a supplemental information disclosure statement is being filed concurrently herewith. This information disclosure statement includes a copy of a search report of November 12, 2007, for European Patent Application EP 04 00 8778, which is the European counterpart to the present application. This information disclosure statement further includes a copy of the references cited in the European search report, along with a copy of the fourteen claims of this European application. As the Examiner will note, the fourteen claims of the European application EP 04 00 8778 are the same as the fourteen originally filed claims of the present application.

A change of address and power of attorney were submitted in this application on November 9, 2007. This change of address and power of attorney appointed the attorneys associated with customer number 28101 to prosecute this application, including the undersigned attorney.

A petition and fee for a one-month extension of time pursuant to 37 C.F.R. §1.136 are also being filed herewith.

Turning to the Office Action of August 14, 2007, claims 1-19 were pending at the time that Office Action was issued. Claims 1, 2, and 6-19 were rejected, and claims 3-5 were objected to for being dependent upon a rejected base claim, but were otherwise indicated as being allowable if they were re-written in independent form to include all of the limitations of their

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respective base claim and any intervening claims.

### **CLAIMS 1 AND 6-14**

With respect to independent claim 1, the Office Action of August 14, 2007 rejected this claim for allegedly being anticipated by U.S. Patent No. 6,115,478 issued to Schneider. Claim 1 has been amended herein. Without conceding the propriety of the rejection of claim 1 prior to this amendment, Applicants respectfully submit that the subject matter of amended claim 1 is neither disclosed nor suggested by the Schneider patent. Amended claim 1 recites, among other things, a serial port for coupling the hearing instrument to an external device separate from the hearing instrument, and "selection circuitry operable to select at least one of the audio input signal, the processed audio signal, and the audio output signal for transmission to the external device via the serial port." Applicants respectfully submit that neither the Schneider patent nor any of the art cited by the European examiner discloses or suggests these features.

The Schneider patent discusses serial ports in three different contexts, none of which disclose or suggest the subject matter of amended claim 1. The first context is located in column 1, lines 33-42, where the Schneider patent discusses the prior art. This discussion of serial ports in the prior art relates to serial ports that are used for programming the hearing instrument. This discussion of serial ports neither discloses nor suggests the subject matter of amended claim 1 because using the serial port to program a hearing aid does not involve transmitting at least one of "the audio input signal, the processed audio signal, and the audio output signal."

The Schneider patent also discusses serial ports at col. 5, lines 1-5 and col. 5, lines 18-21, both of which are in the same context. More specifically, col. 5, lines 18-21 state: "The output of the A/D converter 14, and any additional A/D converter that is provided, may, instead of being connected to the ASIC 16 as shown, be connected to the programmable DSP 18 via a synchronous serial port." This discussion of serial ports likewise neither discloses nor suggests the subject

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matter of amended claim 1. The serial port Schneider discusses in this context is a serial port that may connect A/D converter 14 to DSP 18. Both of these components are internal components of the hearing aid. As such, they do not connect the hearing aid to an external device. To the extent the Examiner may have been considering any of the D/A converter 14, preamplifier 12, or microphone 10 an "external device," claim 1 has been amended to clarify that the external device is "separate from the hearing instrument." Thus, none of the D/A converter 14, preamplifier 12, or microphone 10 can be considered an external device. Still further, amended claim 1 specifies that the serial port is configured to *transmit* at least one of several signals to the external device. The serial port that may be used to connect D/A converter 14 to DSP 18 in the Schneider patent is a serial port that *receives* signals from D/A converter 14. For any one of these reasons, the discussion of the serial port in the Schneider patent at column 5, lines 1-5 and 18-21 does not disclose or suggest the subject matter of Applicants' amended claim 1.

The third context in which the Schneider patent discusses serial ports occurs is with reference to serial port 44 (mentioned at col. 6, lines 15-16 and col. 7, lines 15-20). The discussion of serial port 44, however, does not disclose or suggest the subject matter of amended claim 1. Serial port 44, as discussed in col. 7, lines 15-20, may be connected to a second microphone for beamforming purposes. As is known to those skilled in the art, beamforming is a method by which the ambient sound outside of a person's ear may be detected in a directionally sensitive manner. This occurs by using two (or more) microphones that detect the sound outside the person's ear. As such, beamforming is a process where there are multiple *inputs* into the hearing aid. This is confirmed in col. 7, lines 15-18 of the Schneider patent which state: "The synchronous serial port 44 is provided on the DSP unit 18 so that an additional analog-to-digital converter can be incorporated for processing schemes that require two *input* channels. . . ." [Emphasis added]. The Schneider patent therefore discloses that serial port 44 is provided for receiving signals, not for transmitting signals. As such, the Schneider patent fails to disclose all of the limitations of amended claim 1.

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Still further, it would not have been obvious to modify serial port 44 to transmit signals in accordance with amended claim 1 because there is nothing in the Schneider patent that discloses or suggests transmitting the specific signals mentioned in claim 1 through serial port 44. That is, in addition to failing to disclose the transmission of signals through serial port 44 to an external device, the Schneider patent also fails to disclose or even suggest transmitting one of an audio input signal, a processed audio signal, or an audio output signal through serial port 44.

Because none of the discussions of serial ports in the Schneider patent occur in a context that discloses or suggests the subject matter of claim 1, as discussed above, the rejection of claim 1 should be withdrawn.

The rejection of claim 1 should also be withdrawn for an additional reason separate from, and independent of, the reasons discussed above; namely, the Schneider patent fails to disclose or suggest the selection circuitry specified in amended claim 1. Even if one were to modify the Schneider hearing instrument to include a serial port that transmitted one of the audio signals identified in claim 1, there is still no disclosure or suggestion in Schneider for selection circuitry that is operable to select at least one of the audio input signal, processed audio signal, and the audio output signal. For this additional reason, the rejection of claim 1 should be withdrawn.

Applicants would also like to point out that the subject matter of amended claim 1 should also be allowable over the art cited by the European examiner in European application 04.00 8778.5. As can be seen from the European search report filed with the accompanying Information Disclosure Statement, the European examiner did not identify any prior art that was deemed relevant to claims 2-6. The amendments to claim 1 made herein incorporate the subject matter of claim 2 into claim 1. Accordingly, the prior art cited by the European examiner neither anticipates nor suggests the subject matter of amended claim 1.

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It should also be noted that claim 1 has been amended to replace one instance of the word "transmit" with "communicate." This amendment has not been made for purposes of patentability, but instead has been done to remove any possible confusion that might arise from claim 1's reference to "bidirectional signals" and the connotation of uni-directionality associated with the word "transmit." A similar amendment has been made to dependent claim 16.

In light of all of the foregoing, it is respectfully submitted that claim 1 is in a condition for allowance. Because dependent claims 6-14 depend upon independent claim 1, they are also in a condition for allowance.

#### **CLAIMS 3-5**

Claim 3 has been re-written herein in independent form to include all of the limitations of independent claim 1 and dependent claim 2 (the latter of which has been cancelled herein), from which it formerly depended. Accordingly, claim 3 should now be in a condition for allowance. Further, claims 4-5 are dependent upon claim 3, and therefore should now also be in a condition for allowance.

#### **CLAIMS 15-23**

Claim 15 was rejected in the Office Action of August 14, 2007 for allegedly being anticipated by the Schneider patent. Claim 15 has not been amended herein as Applicants respectfully submit that the Schneider patent does not disclose or suggest all of its limitations. For example, claim 15 recites: "an inner microphone for receiving a second audio signal from inside of the patient's ear canal," along with a serial port that is "configured to transmit the second audio signal to the external device."

The Office Action of August 14, 2007 asserts that the Schneider patent discloses an inner microphone 11 for receiving a second audio signal from within a patient's ear canal. This assertion, however, is not supported by the Schneider patent. The only reference to structure 11 in the Schneider patent occurs in the paragraph beginning in col. 4, line 54 where it states that secondary

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input 11 may comprise a microphone. Nowhere does it state that this secondary microphone is positioned within the ear canal. To the contrary, the Schneider patent discloses that this secondary microphone 11 is an external microphone. At col. 4, lines 60-66, the Schneider patent states:

A secondary input 11 (which may also comprise a microphone) may also be connected to a preamplifier 13 which is in turn connected to an analog-to-digital (A/D) converter 15. Thus, the present invention is embodyable with both monaural applications (i.e. one digital stream) *and stereo applications* (i.e. two digital streams). [Emphasis added].

Clearly, the reference to using the secondary microphone 11 for stereo applications refers to its use as an external microphone as the combination of one external microphone and one internal microphone would not normally be considered a "stereo" application. Thus, the Schneider patent fails to disclose or suggest at least one element of claim 15.

More importantly, even if it would have been obvious to modify the Schneider hearing aid to include an internal microphone (which Applicants do not concede), such a modification would still not result in a device that embodied or suggested all of the limitations of claim 15. Specifically, claim 15 states that it is the "second audio signal" that is transmitted through the serial port to the external device. As noted above, the "second audio signal" comes from the inner microphone. Even if the Schneider device were modified to include an inner microphone, there is no suggestion or disclosure whatsoever of transmitting that audio signal from such a hypothetical inner microphone through any of the serial ports disclosed in the Schneider patent. As was discussed above with respect to claim 1, the Schneider patent discloses serial ports that may be used for three different purposes: (1) for relaying programming instructions, (2) for connecting a microphone input to DSP 18, and (3) for receiving a secondary input used for beamforming purposes (i.e. serial port 44). Not only do none of these three uses of serial ports relate to *transmitting* a signal to an external device, none of them disclose or suggest the specific transmission of an audio signal from an inner microphone to an external device. Accordingly, Applicants respectfully submit that claim 15 is neither anticipated nor suggested by the subject matter of the Schneider patent. Claim 15 should therefore be in a condition for allowance.

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Dependent claims 16-19, which depend upon independent claim 15, should likewise be in a condition for allowance. The same is true of new dependent claims 20-23 that depend upon claim 15.

#### **NEW CLAIMS 24-27**

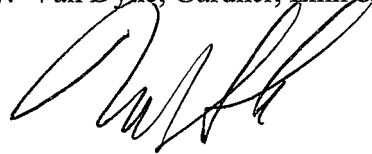
New claims 24-27 should also be allowable over the prior art because none of the prior art suggests or discloses all of the limitations of independent claim 24. Independent claim 24 recites: "selection circuitry operable to select one of the first and second digital audio signals for transmission to the external device via the serial data port." Neither the Schneider reference nor any of the art cited by the European examiner discloses or suggests such selection circuitry.

In light of all of the foregoing, all of the claims should be in a condition for allowance. A notice to such effect is respectfully requested. Should the examiner have any questions, or wish to discuss this response, he is invited to contact the undersigned.

Respectfully submitted,

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By: Van Dyke, Gardner, Linn & Burkhardt, LLP



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